

T3100 Voltage Relay

Combined Over Voltage and Under Voltage Relay

- Price competitive due to the combined functions
- Visual indication of power, pick-up and relay tripping on both relays
- High precision digital countdown timer for delayed output
- Accepts high supply voltage variations: 70 - 120%
- Cost effective and highly reliable compact design
- 50 hours burn-in before final test
- Operating temperature range: -20°C to +70°C
- Certified by major marine classification societies
- Flame retardant enclosure
- DIN rail or screw mounting

Application

The T3100 Voltage Relay is intended for effective voltage monitoring on generators, busbars or other distribution systems. The T3100 will signal when the voltage is out of limits for a preset time period. The limits can be adjusted using the hysteresis knob.

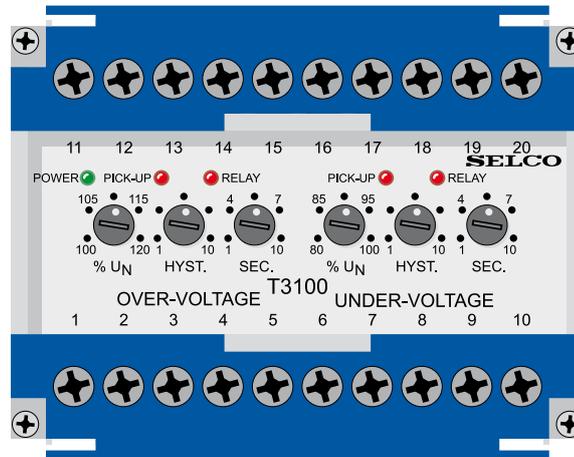
The T3100 is part of the SELCO T-Line series with modular units for protection, control and monitoring of generators, both in marine and land-based applications. The T3100 is type approved by major marine classification societies.

Function

The T3100 consists of two circuit parts fundamentally alike, one circuit part for over voltage and one for under voltage monitoring. Each circuit part has been provided with continuous variable presetting knobs and adjustable time delayed output relays.

The output relay for under voltage is a normally energized relay. It is activated at voltages higher than the preset value. The output relay for over voltage is a normally de-energized relay. It is deactivated at voltages lower than the preset value.

This means that the under voltage relay is activated and the over voltage relay is deactivated within the interval between the under and over voltage scale range.



If an improved voltage situation is demanded before the output goes back to normal, this can be adjusted on the hysteresis on both under and over voltage.

For under voltage the timer is activated if the voltage goes below the under voltage setting and the timer is stopped again when the voltage goes above the setting. Should the time delay expire, the output relay is deactivated and the voltage must now be increased with the preset hysteresis before the relay is activated again.

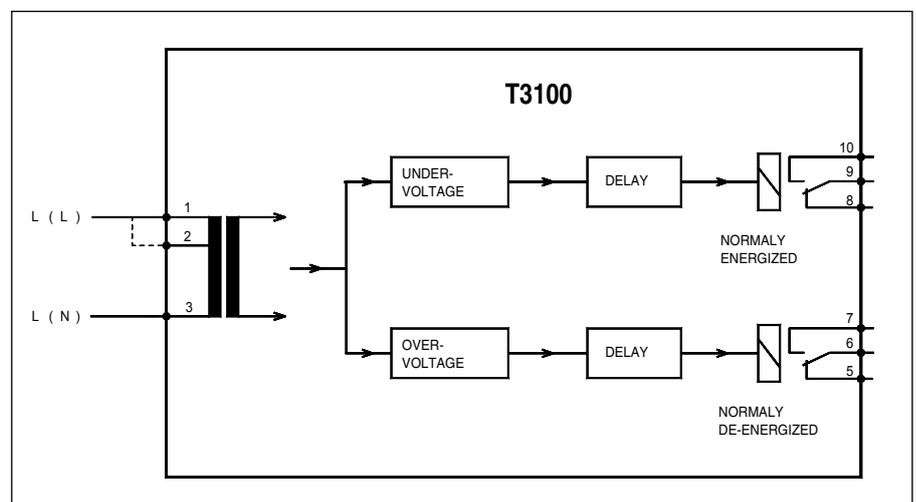
For over voltage, the timer is activated if the voltage goes above the over voltage setting and the timer is stopped again when the voltage goes below the setting. Should the time run out, the output relay is activated and the voltage must

now be decreased with the set hysteresis before the relay is deactivated again.

One LED is illuminated at under voltage and another at over voltage pick-up level. Also two LEDs illuminate when the respective output relays are operated on fault level. The green power LED illuminates when the voltage relay is on power. The connection diagram shows the system de-energized.

Installation

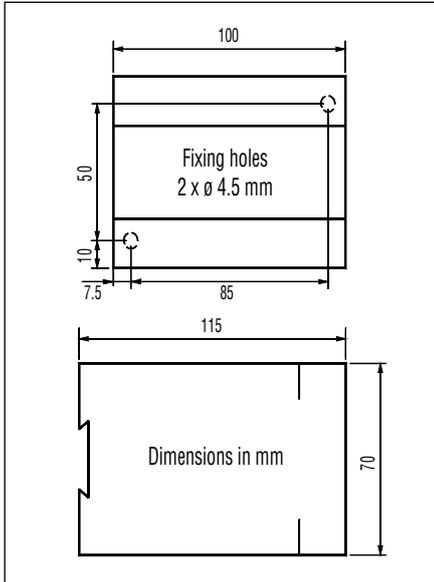
The supply voltage is connected to terminals 1-3 or 2-3 according to the supply source. The voltage detection is done through the supply source. Connections are made as shown in the diagram.



Connection Diagram. Relay shown de-energized.

Specifications

T3100 Voltage Relay



Dimensions.

Type Approvals and Certificates

The T3100 has been designed and tested for use in harsh environments. The unit is based on standard components, providing long term durability.

The T3100 carries the CE label and has been approved by the following marine classification societies:



American Bureau of Shipping
Bureau Veritas
Korean Register of Shipping
Romanian Register of Shipping
Russian Maritime Register of Shipping

Over voltage level	100 - 120%
Delay	1 - 10 sec.
Hysteresis	1 - 10%
Under voltage level	80 - 100%
Delay	1 - 10 sec.
Hysteresis	1 - 10 %
Max. voltage	660V
Voltage range	70 - 120%
Consumption	5VA at U_N
Frequency range	40 - 400Hz
Over voltage relay	Normally de-energized
Under voltage relay	Normally energized
Contact ratings	AC: 250V, 2A, 250VA DC: 60V, 2A, 100W
Overall accuracy	±3% of highest value
Repeatability	±1%
Operating temperature	-20°C to +70°C
Dielectric test	2500V, 50Hz
EMC	CE according to EN50081-1, EN50082-1, EN50081-2, EN50082-2
Approvals	Certified by major marine classification societies
Burn-in	50 hours before final test
Enclosure material	Polycarbonate. Flame retardant
Weight	0.5kg
Dimensions	70 x 100 x 115mm (H x W x D)
Installation	35mm DIN rail or 4mm (3/16") screws

The specifications are subject to change without notice.

Type Selection Table

Type	Terminal	
	1-3	2-3
T3100.0010	230V	
T3100.0020	450V	400V
T3100.0030	110V	100V
T3100.0040	480V	415V
T3100.0060	127V	120V

Other voltages are available on request.

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